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A REVISION OF THE SOLENOMYACIDÆ.

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Having recently to review the species of the Lamarckian genus *Solemya*, and having nearly all the known species for study it was a surprise to find that the group contains three well marked subgenera and several subordinate sections. A full account is in preparation, meanwhile the following synopsis may serve to call attention to the subject :

Genus SOLEMYA Lamarck, 1818.

I. Subgenus *Solemya* s. s.

Ligament amphidetic, chiefly internal. Type *S. australis* Lamarck.

Ligament appearing on the internal face of the valve in advance of the chondrophore.

A. Proximal part of the chondrophore prolonged as a thickened ridge part way across the interior surface of the valve, *S. australis* Lam.

B. Base of the chondrophore divided, anterior part extended as a narrow ridge ; posterior part forming a thickened prop to the chondrophore ; exposed ligament linear. *S. parkinsonii* Gray.

C. Chondrophore thickened, without props or extended rib. *S. solen* v. Salis.

II. Subgenus *Petrasma* Dall, *nov.* Ligament not exposed internally in front of the chondrophore; type *S. borealis* Totten.

A. Chondrophore supported by two strong props with a deep cavity between them.

1. *S. borealis* Totten.

2. *S. velum* Say.

B. Chondrophore with an anterior prop extended as a slender rib in front of the adductor scar; no posterior prop.

1. *S. occidentalis* Deshayes.

2. *S. pusilla* Gould.

3. *S. panamensis* Dall, n. sp.

C. Chondrophore without props. *S. valvulus* Carpenter.

III. Subgenus *Acharax* Dall, *nov.*

Ligament opisthodetic, wholly external, visible internally only where it crosses the gap between the margins of the valves. Nymphs without props. Type *S. johnsoni* Dall.

1. *S. johnsoni* Dall.

2. *S. patagonica* E. A. Smith.

3. *S. agassizii* Dall, n. sp.

4. *S. ventricosa* Conrad, fossil.

5. *S. grandis* Verrill and Bush.

NOTES.—*S. togata* (Poli) auct., and *S. mediterranea* Lamarck, are synonyms of *S. solen*. *S. japonica* Dunker, is the adult of *S. pusilla* Gould. *S. macrodactyla* Rochebrune and Mabille is probably identical with *S. patagonica*, though the unique type of the latter seems pathologically callous dorsally.

S. protexta Conrad, if not the young of *S. ventricosa* Conrad, from the Miocene of Oregon, probably belongs to *Petrasma*.

S. occidentalis Deshayes, is common to the Mediterranean, West Indies and Gulf of Mexico. *S. panamensis* extends from off Santa Barbara, Cal., to Panama Bay; *S. valvulus* Carpenter, from San Pedro, Cal., to the Gulf of California; *S. agassizii* from off Tillamook Bay, Oregon, south to Aguja Point, Peru, in 1036–1800 fathoms, and *S. johnsoni* Dall, from Puget Sound to Panama Bay in 60 to 1740 fathoms.

The rarity of these species, and the fact that they usually break up into fragments in drying, are probably the reasons why the remarkable differences between the hinges of the different species have not previously attracted attention.